

# NASA News

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Spac SELECTED FOR FIRST SPACELAB FLIGHT (National  
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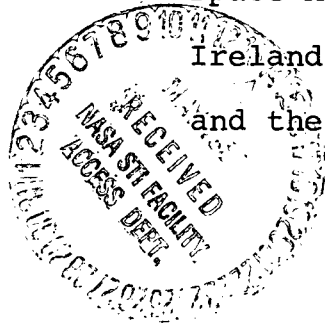
## EXPERIMENTS SELECTED FOR FIRST SPACELAB FLIGHT

NASA and the European Space Agency have selected 37 scientific experiments to be conducted on the first flight of Spacelab, scheduled for launch aboard the Space Shuttle in late 1982.

The experiments fall into five broad categories: atmospheric physics and Earth observations, space plasma physics, material sciences and technology, astronomy and solar physics, and the life sciences. Thirteen are sponsored by NASA; the remainder are the responsibility of the European Space Agency, a consortium of 11 nations. (Member nations of the European Space Agency are Belgium, Denmark, France, West Germany, Ireland, Italy, The Netherlands, Spain, Sweden, Switzerland and the United Kingdom.

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May 8, 1980



Dr. Thomas A. Mutch, NASA Associate Administrator for Space Science, announced selection of the NASA-sponsored experiments in letters to the experiment developers, who are called Principal Investigators.

The selection was made from a list of experiments identified several years ago for definition and development. Three NASA-sponsored experiments and a major European Space Agency facility that were under development had to be deferred and will be assigned to subsequent Spacelab flights. The major limiting factor that prevented the selection of all experiments under development was mass, according to the Spacelab 1 mission manager. Each agency will be able to fly 1,392 kilograms (3,062 pounds) of experiment equipment on the mission.

Spacelab is a flexible laboratory system that can be installed in the cargo bay of the Space Shuttle orbiter to provide an orbital research center for both astronauts and scientists. Unlike its predecessor, Skylab, this new system will not be left in space unattended. It will remain in the Shuttle for the duration of its mission, and be returned to Earth for refurbishment and preparation for the next mission.

The Spacelab facility is being designed and manufactured by the European Space Agency and a European contractor consortium. NASA will furnish the Space Shuttle and will manage the in-orbit activities with support from ESA.

Unique non-astronaut science crew members, called Payload Specialists, will provide support to the Principal Investigators in conducting their experiments in space.

Five Payload Specialists, two Americans and three Europeans, are now training for the first mission. Two of this group, an American and a European, will fly aboard Spacelab 1. The other three will provide support to the mission in the Operation Control Center at NASA's Johnson Space Center, Houston.

The Marshall Space Flight Center, Huntsville, Ala., is Spacelab 1 mission manager for NASA.

The NASA experiments selected and the Principal Investigators involved are:

Dr. Marsha R. Torr  
University of Michigan, Ann Arbor  
An Imaging Spectrometric Observatory

Prof. Tatsuho Obayashi  
University of Tokyo, Japan  
Space Experiments with Particle Accelerators

Dr. Stephen B. Mende  
Lockheed Palo Alto Research Laboratory, Palo Alto, Calif.  
Atmospheric Emission Photometric Imaging

Prof. C. Stuart Bowyer  
University of California, Berkeley  
Far UV Observations Using the Faust Instrument

Prof. Eugene V. Benton  
University of San Francisco, Calif.  
HZE Particle Dosimetry

Dr. Frank M. Sulzman  
Harvard Medical School, Boston  
Characterization of Persisting Circadian Rhythms

Dr. Richard C. Willson  
Jet Propulsion Laboratory, Pasadena, Calif.  
Active Cavity Radiometer Solar Irradiance Monitor

Dr. Raymond L. Gause and Ann F. Whitaker  
Marshall Space Flight Center, Huntsville, Ala.  
Dr. Coda H. T. Pan, Shaker Research Corp.,  
Ballston Lake, N.Y.  
Tribological Experiments in Zero Gravity

Prof. Allan H. Brown  
University of Pennsylvania, Philadelphia  
Nutation of Helianthus Annuus

Prof. Laurence R. Young  
Massachusetts Institute of Technology, Cambridge  
Vestibular Experiments

Dr. Carolyn S. Leach  
Johnson Space Center, Houston  
Influence of Space Flight on Erythrokinetics in Man

Dr. Millard F. Reschke  
Johnson Space Center  
Vestibulo-Spinal Reflex Mechanisms

Prof. Edward W. Voss, Jr.  
University of Illinois, Urbana  
Effects of Prolonged Weightlessness

The Principal Investigators selected for ESA-sponsored  
experiments are:

Dr. M. Ackermann  
Institut d'Aeronomie Spatiale de Belgique,  
Brussels, Belgium  
Grille Spectrometer

Dr. M. Herse  
Service d'Aeronomie du CNRS, Verrieres-Ie-Brusson, France  
Waves in the OH Emissive Layers

Dr. G. Thuillier  
Service d'Aeronomie du CNRS  
Measurement of Solar Spectrum from 170 -3200 Nanometers

Dr. J-L. Bertaux  
Service d'Aeronomie du CNRS  
Lyman Alpha Study of Hydrogen and Deuterium

Dr. Klaus Wilhelm  
Max-Planck-Institut fur Aeronomie,  
Katlenburg-Lindau, Germany  
Low Energy Electron Flux and Its Reaction to Active  
Experimentation on Spacelab

Dr. C. Beghin  
CRPE/CNET/CNRS, Orleans-Cedex, France  
Phenomena Induced by Charged Particle Beams

Dr. D. Crommelynck  
Institut Royal Meteorologique de Belgique, Brussels  
Solar Constant Measurement

Prof. G. Courtes  
Laboratoire d'Astronomie Spatiale, Marseille, France  
Very Wide Field Camera

Dr. R. D. Andresen, ESA/ESTEC/SSD, Noordwijk,  
The Netherlands  
Spectroscopy in X-ray Astronomy

Dr. R. Beaujean  
Institut fur Reine and Angewandte Kernphysik der  
Universitat Kiel, Germany  
Isotopic Stack Measurement of Heavy Cosmic Ray Isotopes

Dr. Helen Ross  
University of Stirling, Scotland, United Kingdom  
Mass Discrimination During Weightlessness

Dr. K. Kirsch  
Physiologisches Institut der Freien Universitat  
Berlin, Germany  
Measurement of Intrathoracic Venous Pressure via a  
Peripheral Vein

Dr. K. Kirsch  
Physiologisches Institut der Freien Universitat Berlin  
Collection of Blood Samples for the Determination of  
Antidiuretic Hormone, Aldosterone and Other Hormones

Prof. Dr. H. Bucker  
DFVLR Institut fur Flugmedizin, Frankfurt, Germany  
Advanced Biostack Experiment

Prof. Aristide Scano  
University of Rome, Italy  
Ballistocardiographic Research in Weightlessness

Dr. G. Horneck  
DFVLR Institut fur Flugmedizin  
Microorganisms and Biomolecules in Space Environment

Dr. H-L. Green  
Clinical Research Centre, Middlesex, Great Britain  
Personal Miniature Electro-physiological Tape Recorder

Dr. Augusto Cogoli  
Eidgenossische Technische Hochschule, Zurich,  
Switzerland  
Effect of Weightlessness of Lymphocyte Proliferation

Deutsche Forschungs-und Versuchsanstalt fur Luft und  
Raumfahrt, Cologne-Porz, Germany  
(Mr. A. Langner, Project Manager)  
Metric Camera

Deutsche Forschungs-und Versuchsanstalt fur Luft  
und Raumfahrt  
(Dr. M. Wahl, Project Manager)  
Microwave Remote Sensing Experiment

Prof. Dr. R. von Baumgarten  
Johannes Gutenberg Universitat, Mainz, Germany  
Effect of Rectilinear Accelerations, Optokinetics and  
Caloric Stimulations on Human Vestibular Reactions  
and Sensations in Space

Deutsche Forschungs-und Versuchsanstalt fur Luft  
und Raumfahrt  
(Mr. H. Steimle, Project Manager)  
Material Science Double Rack Facility

Dr. C. Belouet  
Laboratoire d'Electronique et de Physique Appliquee,  
Limeil, France  
Mercury Iodide Growth

Prof. J. F. Nielsen  
Technical University of Denmark  
Prof. A. Authier  
Universite Pierre et Marie Curie, Paris  
Organic Crystal Growth/Growth of Manganese Carbonate

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